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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,358	03/18/2002	Tara Cutler	MERCK 2388	9086

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EXAMINER

CALEY, MICHAEL H

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,358

Applicant(s)

CUTLER ET AL.

Examiner

Michael H. Caley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19 and 22 is/are allowed.
- 6) ☒ Claim(s) 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winker et al. (U.S. Patent No. 5,504,603 "Winker") in view of Galabova et al. (U.S. Patent No. 6,630,974 "Galabova").

Winker discloses an optical compensator for liquid crystal displays having:

- at least one O plate retarder (Figure 8);
- at least one A plate retarder (Figure 8); and
- at least one negative C plate retarder (Figure 8);

Winker fails to disclose the negative C plate as comprising a linear or crosslinked polymerized chiral liquid crystalline material with a helically twisted structure having a helical pitch of less than 250 nm. Galabova, however, teaches such a structure for a compensator as a means of reflecting light from the IR spectrum as a means of eliminate distortion at large viewing angles (abstract, Column 7 lines 10-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the negative C plate from a chiral liquid crystalline material with a helically twisted structure having a helical pitch of less than 250 nm. As taught by Galabova,

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such a structure may be utilized to achieve the desired retardation while reflecting unwanted light from invisible parts of the light spectrum. One would have been motivated to construct the retarder accordingly to increase the quality of the display at wide viewing angles as taught by Galabova.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (European Application Publication EP 0838713 "Shimizu").

Shimizu discloses an optical compensator for liquid crystal displays having:

- at least one O plate retarder (abstract, layer b);
- at least one planar A plate retarder (abstract, layer c); and
- at least one negative C plate retarder (abstract, layer a).

Shimizu fails to disclose a second negative C plate retarder within the optical compensator. Shimizu, however, teaches that each of the O plate, A plate, and C plate layers may be composed of either a single layer or multiple layers. (Page 4 lines 31-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the negative C plate retarder from a plurality of C plate retarder layers, constituting multiple negative C plate retarders. One would have been motivated to use multiple layers in order to achieve a desired retardation by using commercially available layers, for example. Such a construction technique would be advantageous such that a custom negative C plate retarder need not be constructed to achieve the desired result.

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Allowable Subject Matter

Claims 1-19 and 22 are allowed.

Regarding independent claims 1 and 19, the prior art fails to disclose or suggest an optical compensator having the proposed plate retarders in which the A plate and the O plate have substantially the same retardation.

Regarding independent claim 22, the prior art fails to disclose or suggest an optical compensator having the proposed plate retarders in which the C plate is disposed between the O plate and the A plate. Such a general structure exists between two optical compensators straddling the liquid crystal layer as disclosed by Winker (Column 9, Table I line 66), however, it is neither disclosed or suggested in the prior art that such a structure exist within a single compensator.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (571) 272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



mhc



TOANTON
PRIMARY EXAMINER